

The *latitude* of the Observatory determined by a Troughton's reflecting circle is $51^{\circ} 47' 57'' \cdot 0$ north, and the *longitude*, from simultaneous observations of moon-culminating stars at Oxford, Cambridge, and Hartwell, is $0^h 3^m 29^s \cdot 09$ west.

The following is a general statement of the cost of the building and of the instruments, Dr. Lee having most handsomely presented 15,000 bricks, as well as the piers and dome :—

	£	s.	d.
Bricklayer and stonemason	51	4	6
Carpenter	75	6	1
Mr. Gurney, for wood	47	10	6
Plasterer	25	14	0
Plumber and glazier	28	12	0
Iron-work	16	1	2
	£244	8	3

	£	s.	d.
Timber and work for polar axis.....	24	19	9
Declination axis	19	0	0
12-Foot refractor	100	0	0
Transit instrument	80	0	0
Meteorological instruments	20	0	0
	£243	19	9

The whole expense, consequently, amounts to £488 8s.

Stone, May 9, 1854.

Occultation of Mars observed at Highbury. By T. W. Burr, Esq.

"1854, March 12th. This occultation was observed with my 4-foot equatoreal with power 173.

	h	m	s	
The Immersion began at	14	33	19	Sidereal Time.
The Immersion complete at...	14	34	17	
The Emersion complete at ...	14	58	38	

"The observation of the first contact is a little uncertain, probably 1^s too late, it being difficult to detect the earliest impression made on the planet's limb. The complete eclipse was very accurately noted, as also the complete emersion. The reappearance of the first limb was lost while changing an eye-piece. The time was

and giving ∴ both of them a power of 358 on a telescope of $102\frac{1}{2}$ -inch focus, your solid achromatic has the advantage of being almost entirely free from colour throughout the field, which, though small, is quite equal to that of the Coddington, when the eye-hole is removed from your lens. The eye-hole is too small, not admitting oblique pencils, which are very pure and good; though it is large enough to admit all the rays which come from the object-glass nearly direct." "The smallness of the field (for deep powers) may prevent this from being in general a desirable form for a micrometer eye-piece, though it may prove, when carefully constructed, an agreeable and efficient one for delicate scrutinies of small objects."

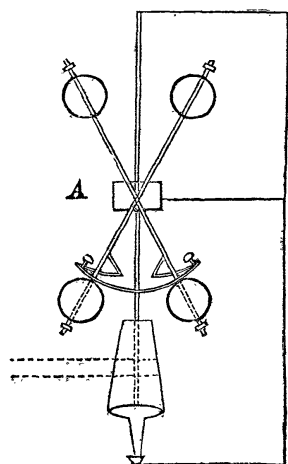
corrected by a transit of α^2 *Librae*, taken during the occultation. No projection of *Mars* on the moon's disk was seen or other anomalous appearance. The definition was very fine, the configuration of the planet's surface being traceable to the last moment of eclipse by the moon's limb without any diminution of sharpness which would have been the case with an extensive lunar atmosphere."

Notes on Experiments relative to Lunar Photography and the Construction of Reflecting Specula. By the Earl of Rosse.

(Extract of a Letter from the Earl of Rosse to the Astronomer Royal.)

"As you mentioned to me in one of your letters that the Astronomical Society would be glad to hear from time to time what we are doing, there are two or three little matters I have been recently engaged in which may, perhaps, interest them.

"First, as to lunar photography. I have constructed a smooth motion-clock to carry the plate of glass, and its performance is satisfactory. The regulator is thus made: there



are two levers with balls on the extremities, which exactly balance in *every position*; they are acted upon by two springs with screw adjustment, and on the expansion of the balls the regulating friction takes place at the ring A.* The object was to obtain a regulator independent of position. The direction of the motion of the glass plate is regulated by an adjustable slide, and we set the slide by trial, not by a table computed for the purpose. To set the slide, an eye-piece, with lines truly parallel to the slide, is inserted. By such means a pretty picture of the moon can be obtained, but at present I believe there is no known photographic process which is sufficiently sensitive to give

details in the *least degree* approaching to the way in which they are brought out by the eye. The application of such a smooth motion-clock to instruments *not equatorially* mounted, may, perhaps, be important, as it affords great facilities for the use of the micrometer. With our 3-foot telescope, I have no doubt, excellent micrometric measures might be obtained; and with a somewhat enlarged small speculum, there would be ample time without hurry. For all objects but the moon, a table might be constructed with little trouble for setting the slide, which would save time.

"You recollect, no doubt, how greatly superior silver would be to speculum metal, if it could be as well and as easily polished as speculum metal. At the Ipswich meeting of the British Association

* The crossed rods pass in the inside of a ring and rub the inner edges of the ring.